Amendments to the Claims

Please add claims 22 and 23 and amend the independent claims as follows. This listing of the claims will replace all prior versions:

Listing of claims:

1. (currently amended) A method for repairing a damaged area in an insulation material comprising:

formulating a patching resin comprising a resinous composition, metal intercalated AlSiO nano structures, and a reactive diluent, wherein the ratio of said metal intercalated AlSiO nano structures to said resinous composition and said reactive diluent is between 3-35 % wt;

applying said patching resin to said damaged area; and

curing said patching resin to produce a patch;

wherein said patching resin has a voltage endurance of at least 1000 hours at 188 volts/mil (7.5 kv/mm);

wherein the viscosity of said patching resin is between 100-300 cps; and

wherein said metal intercalated AlSiO nano structures penetrate said damaged area of said mica insulation material creating a substantially homogenous transition between said damaged area and said patch.

2. (Original) The method of claim 1, wherein the ratio of said metal intercalated AlSiO nano structures to said resinous composition and said reactive diluent is between 5-10 % wt.

3. (Original) The method of claim 1, wherein the curing of said patching resin is performed locally on said damaged area.

4. (Original) The method of claim 1, wherein the temperature of the curing of said patching resins is between about 60-120 °C.

5. (Original) The method of claim 1, wherein the temperature of the curing of said patching resins is approximately 90 °C.

6. (Original) The method of claim 1, wherein the metal in said metal intercalated AlSiO nano structures is one of Cr, Sn, Zn and mixtures thereof.

7. (Original) The method of claim 1, wherein the AlSiO nano structures in said metal intercalated AlSiO nano structures are nanoclays.

8. (Original) The method of claim 1, wherein said resinous composition is bisphenol F.

9. (Original) The method of claim 1, wherein said reactive diluent is at least one of DGENPG, DGEBD and mixtures thereof.

10. (Original) The method of claim 1, wherein the viscosity of said patching resin is between 120-175 cps.

11. (currently amended) A method for repairing a damaged area in a mica insulation material comprising:

formulating a patching resin comprising a resinous composition, metal intercalated AlSiO nano structures, and a reactive diluent, wherein the ratio of said metal intercalated AlSiO nano structures to said resinous composition and said reactive diluent is between 3-35 % wt;

applying said patching resin to said damaged area; and

curing said patching resin with a localized heat on said damaged area of between 60-120 °C;

wherein said patching resin has a voltage endurance of at least 1000 hours at 188 volts/mil (7.5 kv/mm);

wherein said metal intercalated AlSiO nano structures are substantially free of solvent when formulating said patching resin;

wherein the viscosity of said patching resin is between 100-300 cps;

wherein said metal intercalated AlSiO nano structures penetrate said damaged area of said mica insulation material creating a substantially homogenous transition between said damaged area and said patch;

wherein the metal in said metal intercalated AlSiO nano structures is one of Cr, Sn, Zn and mixtures thereof.

12. (currently amended) A method of thickening an insulating tape comprising

formulating a patching resin comprising a resinous composition, metal intercalated AlSiO nano structures, and a reactive diluent, wherein the ratio of said metal intercalated AlSiO nano structures to said resinous composition and said reactive diluent is between 3-35 % wt;

applying said patching resin to said insulating tape;

wherein said patching resin has a voltage endurance of at least 1000 hours at 188 volts/mil (7.5 kv/mm);

wherein the viscosity of said patching resin is between 100-300 cps;

wherein said metal intercalated AlSiO nano structures penetrate said insulating tape creating a substantially homogenous transition between said insulating tape and said patching resin; and

curing said patching resin to produce a thicker insulating tape.

13. (Original) The method of claim 12, wherein the ratio of said metal intercalated AlSiO nano structures to said resinous composition and said reactive diluent is between 5-10 % wt.

14. (Original) The method of claim 12, wherein the curing of said patching resin is performed locally on said damaged area

15. (Original) The method of claim 12, wherein the temperature of the curing of said patching resins is between about 60-120 °C.

16. (Original) The method of claim 12, wherein the metal in said metal intercalated AlSiO nano structures is one of Cr, Sn, Zn and mixtures thereof.

17. (Original) The method of claim 12, wherein the AlSiO nano structures in said metal intercalated AlSiO nano structures are nanoclays.

18. (Original) The method of claim 12, wherein said resinous composition is bisphenol F.

19. (Original) The method of claim 12, wherein said reactive diluent is at least one of DGENPG, DGEBD and mixtures thereof.

20. (Original) The method of claim 12, wherein the viscosity of said patching resin is between 120-175 cps

21. (Original) The method of claim 12, wherein said metal intercalated AlSiO nano structures are substantially free of solvent when formulating said patching resin.

22. (New) The method of claim 12, wherein said patching resin has a voltage endurance of 2800 to 3000 hours at 188 volts/mil (7.5 kv/mm).

23. (New) The method of claim 1, wherein said patching resin has a voltage endurance of 2800 to 3000 hours at 188 volts/mil (7.5 kv/mm).